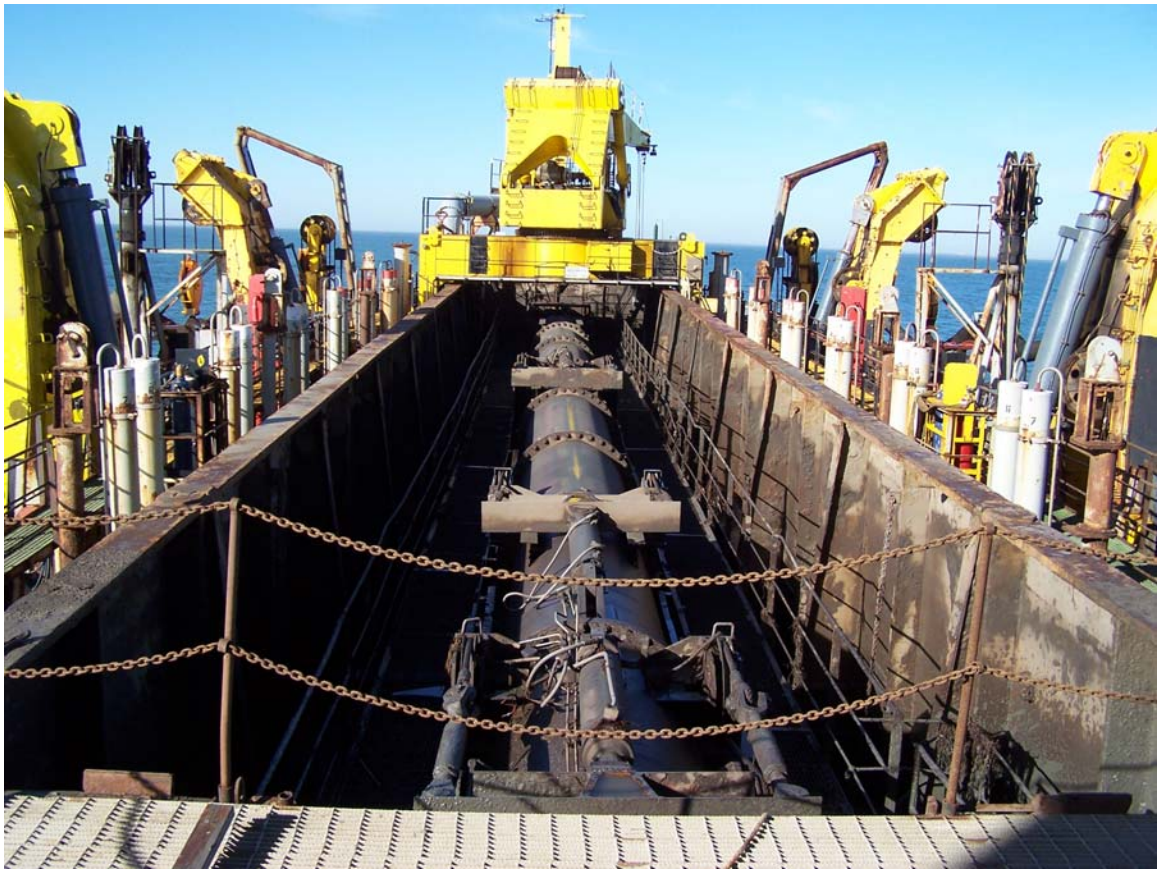
Marine Endangered Species Monitoring Program
Hopper Dredging Project Summary
Freeport, Texas
Channel Maintenance



US Army Corps of Engineers
Bean Dredging
27 December 2005 – 07 February 2006

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ABSTRACT

A twenty-four-hour-per-day endangered species monitoring program was conducted onboard the hopper dredge Stuyvesant from 27 December 2005 through 07 February 2006. Endangered and threatened species targeted include the Loggerhead (Caretta caretta), Kemp's Ridley (Lepidochelys kempii), Green (Chelonia mydas), and Leatherback (Dermochelys coriacea) sea turtles. Observer monitoring was provided by East Coast Observers, inc. (ECO,Inc.) and was at 100%, using two observers approved by the National Marine Fisheries Service (NMFS). This project was awarded by the US Army Corps of Engineers (USACE), and contracted through Bean Dredging, LLC.

INTRODUCTION

The endangered species observer conducted twenty-four hour monitoring aboard the hopper dredge Stuyvesant for the entire channel maintenance project in the Freeport shipping channel in Freeport, Texas. Pursuant to agreements with NMFS, two certified observers were required to work onboard the dredge in 12 hour shifts allowing coverage 24 hours per day.

SCOPE OF WORK

East Coast Observers, Inc. was subcontracted by Bean Dredging, LLC to conduct onboard endangered species monitoring. ECO, Inc. was to provide necessary trained personnel and relevant equipment to inspect, clean and monitor inflow screening located onboard the Dredge Stuyvesant. Observers were also required to monitor the draghead and draghead deflector each time they were brought onboard for cleaning and maintenance, and complete load data sheets for each subsequent load. Any death or injury to endangered species was to be identified, measured, photographed and logged. Proper disposal of said species was to be performed by the observer and dredge personnel. Load sheets were to be completed for each individual load, and included pertinent information to each load. Load time start, load time stop, condition of screening and draghead deflector, type of dredged material, weather and sea conditions, screen contents and species bycatch. Any take information was to be noted on the load data sheet, and then detailed in a separate incident report. Daily and weekly summary forms were to be completed and given to dredge and USACE personnel. Day and night bridge watches were assigned to the observer when not occupied with screen and draghead inspection duties.

Dredging commenced on 27 December 2005 and continued until project completion on 07 February 2006. Two incidental takes involving endangered species (*Chelonia mydas*) occurred during the span of this project, both alive, and were transferred to proper facilities for treatment. By-catch and all pertinent data was recorded and transferred to dredge captain and USACE representative on project site.

Trawling ran in concurrence with dredging 24 hours a day (please refer to trawling summary submitted by ECO, Inc.), and yielded no living or deceased captures of endangered species.

RESULTS

Project Date: 27 December 2005 – 07 February 2006

Project Length: 43 days (dredging), 46 days (including trawling)

Coverage Level: 100% onboard dredge

Total Number of Takes: 2 (Live)

Number of Loads: 567

Water Temperature: 12 -14 degrees Celsius

DISCUSSION

Excessive clogging of intake baskets led to levels of pressure too great for metal screening. This in turn compromised 4”x4” screening, leaving a hole that needed to be repaired by welding. Substrate contained hard clay and mud, which repeatedly clogged intake screening, making monitoring difficult. On several occasions, holding basket was opened with the approval of USACE and endangered species observers to relieve pressure and clear holding basket. Build up of this type of substrate is also counter-productive to dredging efforts, and can seal basket and intake pipes completely. All efforts were made to the satisfaction of endangered species observers to insure protocol was met. 100% overflow screening was in place at project onset, and remained through the duration of this dredging effort. Communication and compliance was adhered to at all times between all parties involved.

Two living incidental takes of *Chelonia mydas* (Green sea turtle) occurred during this effort. While living takes aboard hopper dredges is uncommon, immediate action was taken to provide evacuation of said species to a facility near by (NMFS Galveston Lab). Proper medical evaluation and off-site treatment followed, and on follow up, it may be noted that both living takes will be releasable at a later date.

BY-CATCH LISTING

Blue Crab	***Callinectes sapidus***
Cannonball Jelly	***Stromalophus melaqris***
Croaker	***Micropogun undulates***
Cutlass Fish	***Trichiurus lepturus***
Horseshoe Crab	***Limulus polyphemus***
Sand lance	***Ammodytes americanus***